



23 August 2019

Dr Wendy Craik
Chair
Climate Change Authority

Submitted by email: submissions@climatechangeauthority.gov.au

Dear Dr Craik,

Updating the Authority's Previous Advice on Meeting the Paris Agreement

Origin Energy Limited (Origin) welcomes the opportunity to provide comments on the Climate Change Authority's (CCA) above consultation paper.

Generally, we believe the CCA's previous advice regarding a policy toolkit to achieve Australia's targets¹ remains relevant. Our key points include:

- **Long term targets and strategy:** Origin supports a long-term national target which contributes to a two degree scenario, at a minimum. This should be accompanied by consideration of a long term strategy to achieve this target.
- **Electricity sector targets and policy:** the electricity sector should contribute more than its proportional share of any 2030 target as it has viable options at scale and can help unlock abatement in other sectors, such as the electrification of transport. We continue to support an Emissions Intensity Scheme (EIS) for the electricity sector as the best overall policy in the long term.
- **Research, development and deployment funding:** ARENA and the CEFC should have an important role to play in deploying the next wave of renewable energy and storage technologies.
- **Transport:** both supply and demand side incentives should be considered to accelerate electric vehicle (EV) deployment.
- **Trade exposed industry:** it is important that the impact on trade exposed industries is considered in the design of any future policy and that this preserves the incentive to reduce emissions over time.
- **International units:** we support the limited import of high quality international units at some stage in the future as a potential cost mitigation option. Trade exposed industries should have priority to access any such units.
- **Carry-over units:** we do not support the use of carry-over units from the Kyoto period.

¹ Climate Change Authority 2016, *Towards a climate policy toolkit: Special review on Australia's climate goals and policies*

Long term targets and strategy

As part of the Paris Agreement, nations are encouraged to set long term targets for the period to 2050. We believe it would be beneficial for the Australian Government to consult on such a target, as well as to define a process to consider a long-term strategy to achieve it. This strategy should consider detailed plans for key sectors as well as identify opportunities where Australia may have a comparative advantage in the transition to a low carbon economy.

Many businesses in both Australia and internationally are already considering long term targets and strategies of their own. This is being driven by their stakeholders – including investors, customers and the general public – who are demanding that in the absence of government action, business show leadership on the issue

Origin supports a national target of net zero emissions for the electricity sector in Australia by 2050 or earlier. This target is informed by:

- the international goal to limit global warming to two degrees, or less, above pre-industrial levels;
- the expectation that advanced economies such as Australia should achieve net zero emissions by around the middle of the century²; and
- the crucial role played by the electricity sector in Australia, which currently accounts for a third of national emissions.

When we work backwards from a net zero goal for the electricity sector by 2050 (or earlier) it increases the clarity around our future investment decisions. This is particularly important in the electricity sector which has very long-lived assets.

In 2017, Origin became the first Australian company to set an emissions reduction target approved by the Science Based Targets initiative (SBTi) We have a formal, public commitment to halve our direct (Scope 1 and Scope 2) carbon emissions by 2032, while also committing to a 25 per cent reduction of indirect (Scope 3) emissions target. The reference year for these targets is 2017.

We suggest that prudent national policy should include a long-term vision for a modern, low carbon Australia and identify priority areas for research and development. This process should include consideration of a number of key areas including, but not limited to:

- ***Energy***: how to practically and cost effectively move to a net zero emissions energy sector.
- ***Industry***: how to power major industries with low or zero emissions energy; significant research and development into reducing the emissions of key industrial processes (such as aluminium, steel and cement).
- ***Agriculture***: research and development into low carbon agricultural processes.
- ***Transport***: infrastructure and planning to support the transition to electric vehicles.
- ***Land use***: protection of forests and other key emissions sinks.
- ***International action***: consideration of bilateral/regional agreements with Asia Pacific neighbours to protect carbon stored in forests and other low cost abatement opportunities.

² Paris Agreement, Article 4.

Electricity sector targets and policy

Achieving Australia's Paris climate change targets will be a major challenge for both the electricity sector and the economy generally. Electricity is the largest source of emissions in Australia, accounting for about a third of emissions. Using the electricity sector as an example and assuming it makes a proportional contribution to the reductions mentioned above, then this is equivalent to about a 33 MtCO₂ pa reduction on current levels by 2030.

We suggest that the electricity sector should do more than its proportional share of the emissions reductions required to reach national targets. This is because:

- there are more immediate opportunities available to the electricity sector than other industries or sectors; and
- decarbonising the electricity sector unlocks potential abatement in other sectors e.g. electric vehicles in the transport sector and electrification of industrial activities.

Origin supports the progressive decarbonisation of the electricity sector in Australia and an eventual goal of net zero emissions by 2050 or earlier. We believe that policy should ultimately have this long term target in mind, rather than various interim targets.

At the highest level this involves the substitution of high emissions sources of electricity for lower ones. Whilst this sounds simple, it involves two key and interlinked policy considerations:

- the promotion and integration (firming) of low and zero carbon emissions generation at significant scale; and
- the phased and orderly exit of older, high emissions generation.

Policy should consider the interaction between both climate and energy policy to achieve outcomes that balance reducing emissions, with retaining reliable energy supply at an affordable cost to consumers. Overall, we believe the introduction of a well-designed cost of carbon abatement for the electricity sector is the key to managing this transition.

We continue to support an emissions intensity scheme for the electricity sector as the best overall policy in the long term. This policy has had broad and consistent stakeholder support. However, we recognise the practical barriers to this occurring in the short term.

Generally, Origin supports allowing the market to work with high prices providing the signal for new investment in supply. However, investment in the electricity industry is currently very challenging because of a range of reasons, including:

- the threat of direct investment by Governments, such as the significant proposed expansion of the Snowy hydro scheme (Snowy 2.0);
- continued subsidies for renewables, which in the absence of a broader carbon pricing scheme are driving an awkward transition in the market;
- significant proposed investment in new transmission; and
- high risk of gas market intervention, which may change the fuel price dynamic.

In particular, the lack of an integrated energy and climate policy has been aggravated by a series of ad hoc interventions by various Governments. This is most starkly illustrated by the decision to progress Snowy 2.0. Whilst the expansion of the Snowy scheme will have benefits, it will also impose significant costs which will ultimately be borne by electricity customers. Further, it will not be ready in time to replace the Liddell power station in 2023 and will likely have the impact of crowding out private sector investment in other more timely projects, which could also be more cost efficient for consumers. This is a perverse situation.

Origin is considering a range of projects to both reduce emissions and provide firming for intermittent renewables. This includes:

- a 235 MW expansion of the Shoalhaven pumped hydro storage scheme;
- a 20 MW battery integrated with the existing Eraring power station;
- a 24 MW battery and 200 MW solar farm, co-located with the Uranquinty power station; and
- various other battery projects in the range of 10-50 MW.

However, we remain cautious in deploying capital in the current uncertain policy environment.

Research, development and deployment funding

ARENA and the CEFC have a strong track record of co-funding emerging renewable energy technologies. For example, the large scale solar PV competitive round, which was awarded in September 2016³, was an excellent example of how the co-funding model working together with a competitive market, can lead to the deployment of new technology in Australia, help reduce its cost over time and generally build confidence to invest in this technology at scale. The ARENA announcement in 2016 marked a turning point in the deployment of large solar PV farms in Australia, with a series of announcements being made in the following months.

Most importantly, we view the ARENA/CEFC processes as preferable policy as they generally provide “top-up” funding to enable a projects deployment, whilst leaving the project’s owners to contract with market participants. This preserves important market signals around the location and timing of the project, and minimises potential distortions to the broader market. This can be contrasted to the contracts for difference (CfD) mechanism which seeks to write a direct contract between a Government entity and the owner of a project. Whilst the project owner benefits as their revenue stream is guaranteed, it transfers the risk to the Government (taxpayers) or other electricity customers. It also means that the owner is largely agnostic to the signals sent through the wholesale market.

ARENA and the CEFC should continue to have an important role in deploying the next wave of renewable energy, storage and firming technologies.

Transport

Whilst Australia is currently a laggard in the adoption of EVs, we believe there is an exciting opportunity for the nation to become a market leader in EVs powered by renewable energy sources. We suggest future policy should consider:

- supply and demand side incentives to accelerate EV deployment in Australia;
- policies to raise awareness of the benefits of EVs; and
- positively influence national policies that promote their uptake Australia wide.

As indicated in the most recent update of Australia’s greenhouse gas inventory⁴, emissions from the transport sector are currently about 19 per cent of national emissions and growing steadily, driven by population and economic growth. The mass deployment of EVs could play a major role in reversing this trend, and provide significant benefits in both improving local air quality and reducing greenhouse gas emissions.

³ See <https://arena.gov.au/programs/advancing-renewables-program/large-scale-solar-pv/>

⁴ Quarterly Update of Australia’s National Greenhouse Gas Inventory: December 2018, Commonwealth of Australia 2019.

As the electricity sector progressively decarbonises, it will increase the abatement potential of EVs. Further, with an already high penetration of residential solar PV systems, growth in large scale solar and the emergence of home battery technologies, there is an exciting opportunity for Australia to be a market leader in EVs powered by zero emissions renewable energy sources.

Australia should consider a clear package of policy support for EVs. This could include:

- Government fleet targets
- Aspirational targets for corporate fleets and other private vehicles
- Direct support for charging infrastructure (such as matched funding)
- Direct support to reduce the up-front costs of purchasing EVs
- Other support such as reduced registration fees and stamp duty

As an emerging technology with potentially significant benefits to consumers and society more broadly, we believe there is an important role for government to provide interim support to allow the EV market in Australia to develop. In particular, this could be aimed at addressing a number of current barriers to the greater uptake of EVs in Australia which include: up-front costs, model availability, supporting infrastructure and consumer awareness. This support should be clearly targeted and its impact regularly assessed. Such assistance can then be scaled back as the market in Australia matures.

There are useful comparisons which can be drawn with household solar PV systems and how they were initially supported as an emerging technology in Australia. Originally small solar systems were encouraged with an up-front point of sale rebate of \$8,000 which was funded by the Commonwealth Government. A similar amount would seem appropriate for EV support in Australia. By way of comparison, the Federal government in the USA offers a \$7,500 (USD) income tax credit which is about \$10,000 (AUD). On top of that, various US States offer additional incentives.

On the supply side we suggest that it is important that manufacturers and developers of infrastructure are encouraged to offer new EV products and services in Australia. Generally, Australia is viewed as a small market and product offerings will lag other markets such as North America and Europe. One way to make Australia more attractive would be to drive faster uptake of EVs through strategies which support growth in Government and private fleet buyers. A focus on fleet buyers is suggested as these users are likely to recognise the lifecycle benefits available through EVs earlier than the broader consumer market. Additionally, the recycling of vehicles into the resale market at the end of fleet leasing arrangements provides a lower cost entry point for the broader consumer market. The state government could play a key leadership role by setting targets for the uptake of EVs in their fleets, providing incentives such as reduced registration rates for EVs and by the implementation of mandatory vehicle emissions standards for government contracts.

We currently have over 1,100 vehicles in the Origin fleet, ranging from passenger vehicles right through to heavy duty trucks. We have decided to start by electrifying the small to medium sized passenger segment of our fleet (about 130 vehicles) with a target of having at least 50% of passenger vehicles replaced with EV's by the end of 2021. We have already ordered two EV's which should arrive by August and aim to have 5-10 EVs in the fleet by December.

Trade exposed industry

It is important that the impact on trade exposed industries (such as LNG) is considered in the design of any future climate change policy in Australia. Whilst the Paris Agreement is likely to sustain ongoing action to reduce emissions, it does not mean that issues facing trade exposed industries will be automatically removed. Rather, it suggests that with nations determining their own targets and the policies to deliver these, the difficult issue of impacts on trade exposed industries will remain for the foreseeable future.

Our experience of various climate change mitigation policies including the previous Carbon Pricing Mechanism and the Renewable Energy Target (RET) is that it is very important to understand the detailed design of assistance measures for trade exposed industry. It is imperative that the means of assistance maintains an incentive to abate.

As noted below, one important way to reduce the impact on trade exposed industry is to include access to low cost offsets including international units. However, this should not be the only means.

International units

We understand that future market mechanisms to promote international emissions reductions may look very different to the Kyoto period's Clean Development Mechanism. This is because most nations have their own targets under the Paris Agreement and may be reluctant for abatement projects to be sold to other parties. This suggests that international units may move to a focus on facilitating technology transfer to developing nations, or to specific parts of the land use sector such as protecting forests.

Regardless of how international emissions reductions develop, we believe it is prudent to retain the flexibility provided by them, especially to mitigate costs for key export industries. We note that the CCA has previously made strong recommendations to allow access to genuine international emission reductions as a cost effective means of meeting national targets. Whether this involves the government setting up a fund to purchase such units or more direct access by Australian firms, we would support such access.

One major caveat on this use of international units would be in the electricity sector. As a starting point we would prefer that any electricity sector policy be established as a "closed sector" scheme. No international units, or offsets of any type, would be eligible in such a scheme. Rather, the emphasis would be on promoting investor confidence to fund modern, low emissions replacement generation. Having a closed sector scheme will result in more stable policy settings which should promote greater confidence to invest in new generation assets. This in turn should lower the cost of capital required and lower costs for consumers. We would suggest that access to international units be retained for other industry sectors, particularly those with a high degree of international trade competitiveness.

To counter concerns around the credibility of international offset projects strict qualitative criteria could be placed on the types of units that could be allowed for Australian purposes. Quantitative limits on the amount of permits purchased could also be used as a further safeguard, and as a way of limiting concerns about the outflow of Australian funds. Direct links with other schemes would not be necessary in the first instance. Rather, international units could be a form of third party offset. This would mitigate the policy risk faced by Australian purchasers of international units.

We support the Australian Government encouraging the development of future international market mechanisms, for example through Article 6 of the Paris Agreement or by bilateral/regional agreements with our Asia-Pacific neighbours. Developing such links with our neighbours could also provide broader strategic benefits in the national interest.

Kyoto period 'carry-over'

We do not support the use of carry-over units from the Kyoto period. We believe this goes against the intent of the Paris Agreement and note that no other developed nation is considering using carry-over units to meet their Paris commitments. The use of carry-over units may be viewed by other nations as a further weakening of Australia's pledged 2030 target, which is already a relatively modest one.

If you wish to discuss any aspect of this submission further, please contact me on 02 9503 5674.

Yours sincerely,

A handwritten signature in blue ink that reads "K. Robertson".

Keith Robertson
General Manager Regulatory Policy
Origin Energy Limited
GPO Box 5376
Sydney NSW 2001

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